

8/1/2016

Brookings Cty. Sheriff 315 7th Ave Brookings, SD 57006

RE: Planned Maintenance Proposal

Attn: Marty Stanwick

Cummins Sales and Service is a premier engine and power generation systems provider committed to delivering fast and proven solutions to our customers. We are pleased to offer you a Planned Maintenance Proposal for your review and approval. Due to the critical nature of your standby power system, this Agreement was developed based on your specific needs and equipment to ensure maximum performance and reliability.

Benefits of Planned Maintenance

- Improves system reliability.
- Maintenance performed by certified technicians specifically trained in power generation.
- PM customers receive preferred service for unscheduled emergency repairs.
- Creation of a service record for customer equipment.
- Additional maintenance recommendations documented at that time.
- Scheduling managed by Cummins Sales and Service to ensure timely maintenance intervals.
- Eliminates administrative burden, covers equipment from multiple vendors.

Please sign, date and return the enclosed Agreement to our office along with any purchase documentation necessary so we can tend to your servicing needs. Planned Maintenance Agreements are "auto-renewed" annually prior to the end of your agreement. Should you have any questions or require additional information on this or any other subject relating to your equipment, please feel free to contact me. We look forward to the opportunity to earn your trust and business.

Sincerely,

Dave Kamrowski

Planned Maintenance Sales

Dane Kamrowski

Office: (701) 200-1740

Cell:

Email: dave.kamrowski@cummins.com



Cummins Sales and Service 701 E. 54th Street N. Sioux Falls, SD 57104 Phone: (605) 336-1715

Fax: (605) 336-1748

PLANNED EQUIPMENT MAINTENANCE AGREEMENT

Customer Address Customer Contact Quote Information Brookings Cty. Sheriff Name: Marty Stanwick Quote Date: 8/1/2016 315 7th Ave Phone: (605) 690-5620 Quote Expires: 9/30/2016 Brookings, SD Cell: Quote ID: QT-50 57006 Fax: Quoted By: Dave Kamrowski Customer #: 328530

Payment Type: Pay As You Go E-mail: sheriffmarty@brookingscountysd.gov Quote Term: 3 Year

Unit Name: Make:	250 CUMMINS Cummins	Year	Month of 1st Service	Service Type	Qty	Sell Price	Extended Price	
Model:	250 DQDAA E060928240 250kW 2	1	Unknown	Inspection	1	\$413.61	\$413.61	
S/N: Size: ATS Qty: Notes:		1	Unknown	Full Service	1	\$797.75	\$797.75	
						Year 1 Total:\$1,211.36		
		2	Unknown	Inspection	1	\$423.13	\$423.13	
		2	Unknown	Full Service	1	\$822.10	\$822.10	
						Year 2 Total:\$1,245.23		
		3	Unknown	Inspection	1	\$432.93	\$432.93	
		3	Unknown	Full Service	1	\$847.35	\$847.35	
						Year 3 Total:\$1,	280.28	

Total Agreement Amount:*

\$3,736.88

*Quote does not include applicable taxes



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PLANNED FOLLIPMENT MAINTENANCE ACREEMENT

	\$3,736.88		
Payment Type: Pay As You Go	E-mail: sheriffmarty@brookingscountysd.gov	Quote Term:	3 Year
Customer #: 328530	Fax:	Quoted By:	Dave Kamrowski
57006	Cell:	Quote ID:	QT-50
315 7th Ave Brookings, SD	Phone: (605) 690-5620	Quote Expires:	9/30/2016
Brookings Cty. Sheriff	Name: Marty Stanwick	Quote Date:	8/1/2016
Customer Address	Customer Contact	Quote Information	
	THINED EQUITIVIENT INVAINTENAINCE AG	RECIVIEIVI	

*Quote does not include applicable taxes

Comment:

Total Agreement Amount Does Not Include Applicable Taxes. Please call (402) 551-7678 for invoice total prior to sending payment.

Please return signed agreement to:

10088 South 136th Street Omaha, NE

68138

p: (402) 551-7678 fax: (402) 551-1952

Seller hereby agrees to sell to Buyer, and Buyer hereby agrees to buy from Seller, the foregoing products/services upon the terms and conditions set forth in the "Planned Equipment Maintenance Agreement Terms and Conditions" attached hereto, which are hereby incorporated herein by reference.

Customer Approval (Quote ID QT-50)	Cummins Approval
Signature:	Signature:
Date:	Date:
Plea	ase return this sheet only

CUMMINS CENTRAL POWER PLANNED MAINTENANCE TERMS & CONDITIONS

This agreement is by and between Cummins Central Power, LLC (CCP) and the above listed customer (CUSTOMER) at the listed location for the purpose of inspecting / servicing CUSTOMER's emergency standby generating set(s) and associated Equipment as listed.

- 1. Term: The term of this Agreement shall commence on the Agreement Effective Date (Customer Approval Date) set forth below and will automatically renew on an annual basis, with an annual increase of ______ %. Either Party may terminate this agreement for any reason by giving thirty (30) days written notice to the other party with or without cause.
- 2. Scope of Service:
- A) During the term of this Agreement, CCP agrees to inspect / service the Equipment listed, during the CUSTOMER's regular business hours, on an annual basis. The scope of each such inspection shall include those services set forth on Exhibit A (Planned Maintenance Checklist) attached and herby made part of this agreement.
- B) CCP shall determine the preventative maintenance services required for the Equipment in compliance with manufacturer's specified recommendations. CCP shall make all necessary adjustments and repairs to keep the Equipment in good operating condition in accordance with Exhibit A. CCP's representative shall have full access to Equipment in order to effect the necessary adjustments and repairs. Maintenance parts furnished hereunder will be new or essentially equivalent to new in performance when furnished for use in the Equipment.
- C) Maintenance service shall not include (i) electrical work external to the Equipment; (ii) maintenance of accessories, alterations, attachments or other devices not listed in Exhibit A; (iii) repair of Equipment damaged by accident or misuse; or (iv) any service covered by warranty provided by manufacturers of the Equipment. It is understood this Agreement does not include any parts, lubricants, or coolant solutions, other than items listed in Exhibit A. Any parts and labor other than that specifically mentioned in Exhibit A will be billed to the CUSTOMER at regular rates less ten percent (10%). Customer must approve however all parts and labor charges prior to repair being made.
- D) Additional parts or service between regularly scheduled inspections shall be provided to the CUSTOMER, upon the CUSTOMER's request, at CCP the prevailing labor rates and terms, less ten percent (10%). Charges for such additional service shall include the cost of reasonable travel expenses from the nearest CCP office.
- 3. Fees and Payment: The customer shall pay to CCP all inspection / service fees within 30 days of annual billing for same. Inspection and service fees listed will be reviewed and increased by ______% on each anniversary of the Agreement Effective Date. All amounts due to CCP by CUSTOMER for additional charges or services shall be payable within 30 days of invoice date.
- 4. Taxes: The CUSTOMER will be responsible for all applicable taxes and permits, local, state, federal or otherwise, however designated, which are imposed by reason of the services rendered or parts supplied provided pursuant to the Agreement.
- 5. Conditions of Service:
- A) This Agreement is contingent upon proper use of the Equipment and does not cover Equipment which has been modified or which has been subjected to unusual physical or electrical stress. CCP shall not by responsible to the CUSTOMER for loss of use of the Equipment or for any other liabilities arising from alterations, additions, adjustments or repairs which has been made to the Equipment other than by authorized representatives of CCP. If, in the opinion of CCP, any such alterations, additions, adjustment or repairs adversely affect CCP's ability to render maintenance service to the Equipment CCP reserves the right to terminate the Agreement upon thirty (30) days prior written notice to the CUSTOMER.
- B) The CUSTOMER shall test the Equipment on a monthly basis, during the term of this Agreement and shall notify CCP promptly by telephone, confirmed in writing, of any Equipment failure or default and shall give CCP access to the Equipment as may be necessary to diagnose and repair any such failure or default.
- 6. Disclaimer of Warranty: CCP MAKES AND THE CUSTOMER RECEIVES NO WARRANTY, EXPRESS OR IMPLIED AND THERE IS EXPRESSLY EXCLUDED ALL WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE CUSTOMER SHALL RECEIVE ONLY REPRESENTATIONS AND WARRANTY OF THE MANUFACTURE(S) WITH RESPECT TO ANY NEW PARTS INSTALLED IN THE EQUIPMENT BY CCP.
- 7. Liability of CCP: CCP shall not be liable for any loss or injury to CUSTOMER, CUSTOMER's personnel, agents and employees, assigns, customers, patients or contractors for loss or damage to person or property arising from the use of the Equipment inspected or serviced by CCP unless such injury or damage is a direct result of CCP's malfeasance, misfeasance, or negligence.

Power Generation SystemPlanned Maintenance



INSPECTION

MONTHLY, QUARTERLY, OR ONE-TIME PER YEAR

Battery & Battery Charger System

- · Check battery charger functions
- Cable connections, termination cleanliness and security
- Check electrolyte level, vent caps of all cells in the starting batteries
- Battery conductance test

Fuel System

- Inspect main tank / day tank fuel level
- Inspect day tank controls and pumps. Test operate day tank controls (where available)
- Inspect all fuel hoses, clamps, pipes, components, and fittings
- Inspect governor linkage
- · Visually inspect rupture / containment basin
- Water in Fuel Test Sub-base, day tanks
- Optional fuel sample for laboratory analysis*

Engine Cooling System

- Inspect all hoses and clamps for leaks, coolant level, and condition
- · Inspect radiator cap and filler neck condition
- · Inspect drive belts, observe alignment and deflection
- Observe coolant heater operations
- Utilize DCA test strip to record coolant properties
- Inspect radiator surfaces, shrouds, and barriers, for obstruction
- Visually inspect low temperature after cooler coolant
- Optional coolant sampling*

Engine & Lubrication System

- Inspect lubrication system (visually check oil level)
- Inspect crankcase ventilation system
- Inspect spark ignited ignition system
- Oil sample for laboratory analysis when recommended

Intake / Exhaust System

- Inspect air cleaner element and entire intake system
- · Inspect exhaust system and rain cap
- · Inspect louver operations

Generator Controls & Power Connections

- Visually inspect all engine mounted wiring, senders, and devices
- Visually inspect all control mounted components and wiring
- · Lamp test all lights and indicators
- Visually inspect breaker and power connections
- Manually operate generator main breaker(s) open and closed**
- **NOTE: Will not exercise breakers or contactors on a paralleling device

Generator Operations

- Start and observe generator and equipment operations
- Verify engine and generator safeties for proper operation
- System test with or without load

Automatic Transfer Switch

Paralleling Switchgear, Bypass Switchgear, Manual Transfer Switches

- Visually inspect all power and control wiring
- Visually inspect switch mechanism and enclosure
- Visually inspect controls and time delays settings
- Verify function of exercise clock

FULL SERVICE

INCLUDES INSPECTION

Operational & Functional Review of Generator Critical Components

- Inspect engine cooling fan & fan drives for excessive wear or shaft wobble
- · Check all pulleys, belt tensioners, slack adjusters & idler pulleys for travel, wear & overall condition
- Inspect / lubricate drive bearings, gear or belt drives, and other shaft connecting hardware

Lubrication Oil & Filtration Service

- Change engine lubrication oil
- Change primary lubrication and bypass filters
- Change fuel filters
- · Post lube services operations of genset (unloaded) at rated temperature

*Additional Charge

Any additional repairs, parts, or service which are required will be brought to the attention of the owner. Repairs will only be made after proper authorization from the owner is given to Cummins. Any additional repairs, maintenance or service performed by Cummins or a Planned Maintenance Agreement holder will be at current Cummins labor rates.

NPower PLANNED MAINTENANCE CHECKLIST

A CANADA		Standard Insp	ection			
				UNIT NAME_		
our Service 642-0085		FIEL		OF SERVICE		
)42-0003		FIEL		OB NUMBER_ JNIT HOURS_		
SSI N/A	eds			_		
	A DDE ODERATIONAL OUT	-01/0				
	A. PRE-OPERATIONAL CHE	:CKS				
	D DATTEDIC AND DATTE	DV OLLABOED	10.10	TALL DATE		
	B. BATTERIES AND BATTE Float volts			STALL DATE_		
	Record highest and lowest sp					
			u.			
	Battery load test	Low		-		
	TEST CCA	Amhient Temperature				
		loat Volts			Pass/ Fail	
		oat Volts				
		oat Volts				
		oat Volts				
					, door , dii,	
	C. ENGINE COOLING SYSTI	EM LAST C	OOLANT FIL	L DATE		
				 em Pressure_	F	PSI
	Coolant properties					
	Freeze Point	DCA C	concentration			
	PH Level	Sulfates		Chlorides_		Appearance
	LTA coolant					
	Freeze Point	PH Level		Appearance _		
	D. GENSET CONTROLS AND	ACCESSORIES				
	E. MAIN ALTERNATOR					
200						
	F. FUEL SYSTEM					
	Check main tank f	fuel level		Secondary mai	n tank level _	
	Check day tank f	fuel level				
	Check fuel	pressure	Running		Loaded _	
April 1						
	G. INTAKE AND EXHAUST S	YSTEMS				
E SUL I						
	H. ENGINE AND LUBRICATION	ON SYSTEM				
	I. GENERATOR OPERATION	S				



PLANNED MAINTENANCE CHECKLIST Standard Inspection

Battery Voltage Engine Speed Exhaust Temp Coolant Press Blowby Flow LTA Temp	PASS N/A Needs Attn			
Coolant Temp Battery Voltage Engine Speed Exhaust Temp Coolant Press Blowby Flow LTA Temp Genset Voltage: A B C Current: A B C Load KW Load KVA Load KVAR Duration of system test Minutes M. SITE PRE-DEPARTURE VERIFICATION	K. TRANSFER SWITCH/ SWITCHGEAF	२		
Genset test without load, load test not permitted by: Record engine and load data. Oil Pressure Oil Temperature Coolant Temp Battery Voltage Engine Speed Exhaust Temp Coolant Press Blowby Flow LTA Temp Genset Freq/Hz Load PF Genset Voltage: A B C Current: A B C Load KW Load KVA Load KVAR Duration of system test Minutes M. SITE PRE-DEPARTURE VERIFICATION	Measure and record ut	tility/ source one voltage		
Genset test without load, load test not permitted by: Record engine and load data. Oil Pressure Oil Temperature Coolant Temp Battery Voltage Engine Speed Exhaust Temp Coolant Press Blowby Flow LTA Temp Genset Freq/Hz Load PF Genset Voltage: A B C Current: A B C Load KW Load KVA Load KVAR Duration of system test Minutes M. SITE PRE-DEPARTURE VERIFICATION				K-11-19-19-19-19-19-19-19-19-19-19-19-19-
Record engine and load data. Oil PressureOil TemperatureCoolant Temp Battery VoltageEngine SpeedExhaust Temp Coolant PressBlowby FlowLTA Temp Genset Freq/HzLoad PF Genset Voltage: ABC Current: ABC Load KWLoad KVALoad KVAR Duration of system test Minutes M. SITE PRE-DEPARTURE VERIFICATION	L. SYSTEM OPERATIONAL TESTS			
Oil Pressure Oil Temperature Coolant Temp Battery Voltage Engine Speed Exhaust Temp Coolant Press Blowby Flow LTA Temp Genset Freq/Hz Load PF Genset Voltage: A B C Current: A B C Load KW Load KVA Load KVAR M. SITE PRE-DEPARTURE VERIFICATION	Genset test without load, loa	ad test not permitted by:		
Battery Voltage	Record engine and load data.			
Coolant Press Blowby Flow LTA Temp Genset Freq/Hz Load PF Genset Voltage: A B C Current: A B C Load KW Load KVA Load KVAR Duration of system test Minutes M. SITE PRE-DEPARTURE VERIFICATION	Oil Pressure	Oil Temperature		Coolant Temp
Genset Freq/Hz	Battery Voltage	Engine Speed		Exhaust Temp
Genset Voltage: A B C Current: A B C Load KW Load KVA Load KVAR Duration of system test Minutes M. SITE PRE-DEPARTURE VERIFICATION	Coolant Press	Blowby Flow		LTA Temp
Current: A B C Load KW Load KVA Load KVAR Duration of system test Minutes M. SITE PRE-DEPARTURE VERIFICATION		Genset Freq/Hz		Load PF
Load KW Load KVA Load KVAR Duration of system test Minutes M. SITE PRE-DEPARTURE VERIFICATION	Genset Voltage: A	В	С	<u> </u>
Duration of system test Minutes M. SITE PRE-DEPARTURE VERIFICATION	Current: A	В	c	<u> </u>
M. SITE PRE-DEPARTURE VERIFICATION	Load KW L	oad KVALoad	d KVAR	
	Duration of system test	Minutes		
omments:	M. SITE PRE-DEPARTURE VERIFICAT	rion		
	omments:			

currenins NPower

PLANNED MAINTENANCE CHECKLIST

Standard Inspection

Below is the scope of work performed during the above planned maintenance checklist. Any additional repairs, parts, or service which are required will be brought to the attention of the owner. Repairs will only be made after proper authorization from the owner is given to Cummins NPower, LLC. Any additional repairs, maintenance or service performed by Cummins NPower, LLC for a Planned Maintenance Agreement holder will be at Cummins NPower LLC labor rates.

A. PRE-OPERATIONAL CHECKS

- 1. All equipment automated, no alarms or faults on controls
- 2. Check fluid levels and observe for leaks. Oil, Fuel and Coolant
- 3. Verify battery chargers, component heaters and accessories are operational
- 4. Safety Audit, Lock Out/ Tag Out Procedures Followed, Safe Service Operations

B. BATTERIES AND BATTERY CHARGER

- 1. Check battery charger functions and record voltage and current
- 2. Cable connections, termination cleanliness and security
- Check electrolyte level, vent caps and specific gravity of all cells in the starting battery system
- 3.a Record highest and lowest specific gravity measured.
- Perform Battery load test on all starting batteries and record cca, ambient temperature, float volts, hold volts, and if the battery passed or failed testing.

C. ENGINE COOLING SYSTEM

- 1. Inspect all hoses and clamps for leaks and condition
- 2. Inspect radiator cap and filler neck condition
- 3. Inspect drive belts, observe alignment and deflection
- 4. Confirm proper coolant heater operation and record jacket water temperature
- 5. Verify Coolant properties and record the freeze point, DCA concentration, PH level, Sulfates, Chlorides, and appearance.
- 6. Inspect radiator surfaces, shrouds and barriers for obstruction, build up and mechanical damages
- 7. Verify LTA coolant properties and record the freeze point, PH level, and appearance. (if applicable)
- 8. Optional coolant sampling

D. GENSET CONTROLS AND ACCESSORIES

- 1. Check all engine mounted wiring, senders and devices
- 2. Check all control mounted components and wiring
- 3. Check all connecting plugs
- 4. Check all accessory components and wiring
- 5. Function test lights and indicators

E. MAIN ALTERNATOR

- 1. Remove covers and inspect terminals, wiring and components
- 2. Visually inspect main rotor and stator
- 3. Visually inspect exciter components and PMG (where equipped)
- 4. Manually operate generator main breaker(s) open and closed

F. FUEL SYSTEM

- 1. Check main and secondary (if applicable) tank fuel and record levels
- 2. Check day tank fuel and record level (if applicable)
- 3. Check daytank controls and pumps. Test operate daytank controls where available (if applicable)
- 4. Check all fuel hose, clamps, pipes, components and fittings
- 5. Check fuel pressure and record readings running and loaded
- 6. Check governor linkage (if applicable)

- 7. Water in Fuel Test Sub-base, day tanks or as noted on agreement
- 8. Rupture/ Containment Basin Inspection (if applicable)

G. INTAKE AND EXHAUST SYSTEMS

- 1. Check air cleaner element
- 2. Check intake system
- 3. Check exhaust system and raincap
- 4. Check louver operations (if applicable)

H. ENGINE AND LUBRICATION SYSTEM

- 1. Check lubrication system
- 2. Check crankcase ventilation system
- 3. Check spark ignited ignition system (if applicable)

I. GENERATOR OPERATIONS

- 1. Start and observe generator and equipment operations
- 2. Verify engine and generator safeties as applicable

K. TRANSFER SWITCH/ SWITCHGEAR

- 1. Inspect all power and control wiring
- 2. Inspect switch mechanism and enclosure
- 3. Inspect controls and time delay settings
- 4. Check exercise clock
- 5. Verify remote start control operation
- 6. Measure and record utility/ source one voltage

L. SYSTEM OPERATIONAL TESTS

- 1. Genset test with or without load, if not allowed document decision maker
- 2. During test without load record engine oil pressure, oil temperature, coolant temperature, battery voltage, engine speed, exhaust temperature, coolant pressure, blowby flow, LTA temperature. Also record generator voltage on all phases, frequency, current on all phases, load PF, load KW, Load KVA, and Load KVAR.
- 3. Record duration of system test in minutes

M. SITE PRE-DEPARTURE VERIFICATION

- 1. All applied energy source lock out devices removed
- 2. All controls and components in AUTO/REMOTE
- 3. All GENSET breakers ON/CLOSED (except power operated paralleling breakers)
- 4. Battery Charger operational/ breaker ON
- 5. Component heaters enabled/ breaker ON
- 6. Site Cleanup



PLANNED MAINTENANCE CHECKLIST Full Service

24 Hour Service 800-642-0085

DATE OF SERVICE _______
FIELD AWARE JOB NUMBER ______
UNIT HOURS

000 012 0000			FIELD	AWARE JUD NUMBER	
PASS N/A Nec		NAL CHECKS		UNIT HOURS_	
	B. BATTERIES AN	D BATTERY CHAR	SER INST	ALL DATE	
	Float volts	Current			
	Record highest and	lowest specific grav	ty measured		
	High		Low		
	Battery load test				
	TEST CCA	Ambient Tempera	ture		
	Battery 1:	Float Volts	Hold Volts	Pass/ Fail_	
	Battery 2:	Float Volts	Hold Volts_		
	Battery 3:	Float Volts	Hold Volts		
	Battery 4:	Float Volts	Hold Volts	Pass/ Fail	
	Coolant properties Freeze Point PH Level LTA coolant	DCA	Concentration Chlorides	Cooling System PressureAppearance	
	D. GENSET CONTR		ORIES		
	E. MAIN ALTERNAT	OR			
		nk fuel level		condary main tank level_	
	Check day tar	nk fuel level			
	Check fu	el pressure	Running	Loaded	
	G. INTAKE AND EX	HAUST SYSTEMS			

H. ENGINE AND LUBRICATION SYSTEM



PLANNED MAINTENANCE CHECKLIST Full Service

PASS N/A Needs Attn I. GENERATOR OPE	RATIONS		
J. LUBRICATION OIL	L AND FILTRATION SERVICE		
K. TRANSFER SWITE	CH/ SWITCHGEAR d record utility/ source one voltage		
L. SYSTEM OPERAT Genset test without Record engine and lost	ut load, load test not permitted by:		
Oil Pressure	Oil Temperature		Coolant Temp
Battery Voltage	Engine Speed		Exhaust Temp
Coolant Press			LTA Temp
Genset Voltage:	Genset Freq/Hz		Load PF
A	В	c	
Current:			
Α	В	c	
Load KW	Load KVALoa	ad KVAR	
Duration of s	ystem testMinutes		
M. SITE PRE-DEPAR	RTURE VERIFICATION		



PLANNED MAINTENANCE CHECKLIST Full Service

Below is the scope of work performed during the above planned maintenance checklist. Any additional repairs, parts, or service which are required will be brought to the attention of the owner. Repairs will only be made after proper authorization from the owner is given to Cummins NPower, LLC. Any additional repairs, maintenance or service performed by Cummins NPower, LLC for a Planned Maintenance Agreement holder will be at Cummins NPower LLC labor rates.

A. PRE-OPERATIONAL CHECKS

- 1. All equipment automated, no alarms or faults on controls
- 2. Check fluid levels and observe for leaks. Oil, Fuel and Coolant
- 3. Verify battery chargers, component heaters and accessories are operational
- 4. Safety Audit, Lock Out/ Tag Out Procedures Followed, Safe Service Operations

B. BATTERIES AND BATTERY CHARGER

- 1. Check battery charger functions and record voltage and current
- 2. Cable connections, termination cleanliness and security
- 3. Check electrolyte level, vent caps and specific gravity of all cells in the starting battery system
- 3.a Record highest and lowest specific gravity measured.
- 4. Perform Battery load test on all starting batteries and record cca, ambient temperature, float volts, hold volts, and if the battery passed or failed testing.

C. ENGINE COOLING SYSTEM

- 1. Inspect all hoses and clamps for leaks and condition
- 2. Inspect radiator cap and filler neck condition
- 3. Inspect drive belts, observe alignment and deflection
- 4. Confirm proper coolant heater operation and record jacket water temperature
- Verify Coolant properties and record the freeze point, DCA concentration, PH level, Sulfates, Chlorides, and appearance.
- 6. Inspect radiator surfaces, shrouds and barriers for obstruction, build up and mechanical damages
- 7. Verify LTA coolant properties and record the freeze point, PH level, and appearance (if applicable)
- 8. Optional coolant sampling

D. GENSET CONTROLS AND ACCESSORIES

- 1. Check all engine mounted wiring, senders and devices
- 2. Check all control mounted components and wiring
- 3. Check all connecting plugs
- 4. Check all accessory components and wiring
- 5. Function test lights and indicators

E. MAIN ALTERNATOR

- 1. Remove covers and inspect terminals, wiring and components
- 2. Visually inspect main rotor and stator
- 3. Visually inspect exciter components and PMG (where equipped)
- 4. Manually operate generator main breaker(s) open and closed

F. FUEL SYSTEM

- 1. Check main and secondary (if applicable) tank fuel and record levels
- 2. Check day tank fuel and record level (if applicable)
- 3. Check daytank controls and pumps. Test operate daytank controls where available (if applicable)
- 4. Check all fuel hose, clamps, pipes, components and fittings
- 5. Check fuel pressure and record readings running and loaded
- 6. Check governor linkage (if applicable)

- 7. Water in Fuel Test Sub-base, day tanks or as noted on agreement
- 8. Rupture/ Containment Basin Inspection (if applicable)

G. INTAKE AND EXHAUST SYSTEMS

- 1. Check air cleaner element
- 2. Check intake system
- 3. Check exhaust system and raincap
- 4. Check louver operations (if applicable)

H. ENGINE AND LUBRICATION SYSTEM

- 1. Check lubrication system
- 2. Check crankcase ventilation system
- 3. Check spark ignited ignition system (if applicable)

I. GENERATOR OPERATIONS

- 1. Start and observe generator and equipment operations
- 2. Verify engine and generator safeties as applicable

J. LUBRICATION OIL AND FILTRATION SERVICE

- 1. Change lube oil
- 2. Change lube oil filters, apply date and run hours to filter canister
- 3. Change fuel filters, apply date and run hours to filter canister
- 4. Drain sediment from coolant heater where equipped
- Change coolant filters as equipped, apply date, freeze point and dca concentration to canister
- 6. Pressure test cooling system and record PSI readings
- 7. Check fan, water pump, drives and pulleys
- 8. Grease serviceable bearings
- 9. Post Lube service operation of Genset unloaded
- 10. Oil sample for laboratory analysis when recommended"
- 11. Change crankcase ventilation filter (if applicable)

K. TRANSFER SWITCH/ SWITCHGEAR

- 1. Inspect all power and control wiring
- 2. Inspect switch mechanism and enclosure
- 3. Inspect controls and time delay settings
- 4. Check exercise clock
- 5. Verify remote start control operation
- 6. Measure and record utility/ source one voltage

L. SYSTEM OPERATIONAL TESTS

- 1. Genset test with or without load, if not allowed document decision maker
- 2. During test without load record engine oil pressure, oil temperature, coolant temperature, battery voltage, engine speed, exhaust temperature, coolant pressure, blowby flow, LTA temperature. Also record generator voltage on all phases, frequency, current on all phases, load PF, load KW, Load KVA, and Load KVAR.
- 3. Record duration of system test in minutes

M. SITE PRE-DEPARTURE VERIFICATION

- 1. All applied energy source lock out devices removed
- 2. All controls and components in AUTO/REMOTE
- 3. All GENSET breakers ON/CLOSED (except power operated paralleling breakers)
- 4. Battery Charger operational/ breaker ON
- 5. Component heaters enabled/ breaker ON
- 6. Site Cleanup